

**ABSTRACT OF THE INVENTION**

Various circuit configurations for use in switch assembly used in a surgical hand piece system are provided. The circuit configuration provide a number of functions such as permitting the presence and direction of conductivity to be detected. The circuit configurations also provide a means for detecting and measuring the degree of influence of debris which is located between the conductive members of the handpiece. In addition, the circuit configurations also provide a means for identifying the type of switch end cap which is attached to the handpiece. The handpiece body and the switch mechanism are electrically connected to one another in such a manner that permits the switch end cap to be freely rotated about the handpiece body and reduces the number of conductive members needed to communicate the status of each switch.

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